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STATUE OF SIR ISAAC NEWTON, IN TRINITY-COLLEGE, CAMBRIDGE.

NATIONAL STATUES. No. VII.

SIR ISAAC NEWTON.

THE white marble statue of Newton, represented in our engraving, was erected in 1750, to the memory of that famous person, at the expense of Dr. Robert Smith, Master of Trinity College, Cambridge. It stands in the ante-chapel of the College, and is of first-rate merit as a work of art, being a finished production of the eminent sculptor, L. F. Roubiliac, about whom we might say much that would interest our readers. This, however, we shall reserve to another opportunity, and proceed at once to furnish a memoir of the greatest philosopher that ever lived.

ISAAC NEWTON was born at Woolsthorpe, in the parish of Colsterworth, Lincolnshire, on Christmas-day, old style, 1642. He was remarkably small and tender, as a child, and it was a saying of his mother, that at that time she could have put him into a quart mug; but, as he grew up, he became robust, and enjoyed the blessing of health and a vigorous constitution till his eightieth year. At twelve years old, having received some previous instruction, he was sent to the grammar-school at Grantham, where, like Bacon*, at about the same age, he showed remarkable proofs of a gifted and thoughtful mind. Instead of playing with the other boys, he was almost always busied in forming different kinds of models in wood: for this purpose, he procured saws, hatchets, hammers, and other tools; and even succeeded in producing a wooden clock. The object, however, which chiefly engaged his attention, was a new windmill, building near Grantham. Watching the progress of its construction, he made one on a very small scale, which in workmanship was considered equal to the original. When finished, he set it upon the top of the house where he lodged; and fitting a small piece of linen to each of the sails, saw how the wind turned them. He put a mouse into the mill, and called it the *mill*; who, instead of helping to turn the sails, as his master wished, often stopped to eat the corn that was put in to be ground.

We have not room, curious as it might be, to describe all his various plans of this kind, the pursuit of which generally kept him low in his class at school: but little did his master and school-fellows imagine, when noticing the neat kites he flew at Grantham, and the transparent paper lanterns with candles in them, fastened to their tails, which looked at night like so many comets, that the young inventor would one day astonish not only Europe, but the whole world, by his discovery of the intricate though harmonious laws of creation itself, and aid in evincing the wisdom of God in the most wonderful of His works! And still less did his mother dream of this mighty result, when she took him away from school, to help in keeping his late father's farm, and to attend the Saturday market at Grantham. Often, indeed, did he stop between his home and that town, to study some old book under a hedge; or when set about watching sheep, would he sit sadly, though not idly, beneath a tree. It has been said that a really clever person is seldom altogether idle; and, doubtless, from the period at which Newton could think and reason, his mind was incessantly and profoundly at work.

Such a genius could not long remain concealed; and an uncle, who was a clergyman, and a man of excellent sense, became the instrument, under Providence, of effectually directing the mind of Newton into the track for which it was formed, by getting him placed at the University. Trinity maintained at that period, as we believe it does now, the leading place

among colleges at Cambridge, both in classics and mathematics; and while that royal foundation continues to receive lustre from such names as LORD BACON, ISAAC BARROW, COTES, NEWTON, DRYDEN, BENTLEY, and PORSON, (we refrain from citing living worthies, of whom there are not a few,) it shows itself at this day not undeserving the place of eminence which it formerly enjoyed. Of this College, in the ever-memorable year 1660, when he was eighteen years old, the great Newton became a member; Dr. Barrow, a Fellow and Professor, being his friend, and the director of his studies.

Having taken his degree of Bachelor of Arts in 1664, he was driven from Cambridge in the following year, by the plague, which did not confine its ravages to London. It was at about this period of his absence from the University, perhaps when at Woolsthorpe, that the circumstance of an apple falling to the ground from a tree, as he sat beneath it in a garden, gave him the first idea of the law of gravitation, which he afterwards followed out into the most important results. By unwearied application, he is said to have hence determined the principle of motion of the earth, the moon, the several planets, and the comets, in their respective orbits! One of the best poets of our times, in his *Lines on a Tear*, exquisitely alludes to the application of the same mighty principle to the greatest and the least of things:—

That very law† which moulds a tear,
And bids it trickle from its source,—
That law preserves the earth a sphere,
And guides the planets in their course.—ROGERS.

In 1667, Newton, having laid the foundation of his great work, "The Mathematical Principles of Natural Philosophy," returned to Cambridge, and was elected Fellow of his College. In 1669, he succeeded Barrow, as Lucasian professor of Mathematics, and in 1672 became a Fellow of the Royal Society, an institution then in its infancy, to which he communicated his "New Theory of Light and Colours." This was his favourite discovery, and had, previous to its publication, employed him for thirty years. So early as 1664, he bought a prism at Cambridge, and in 1666 proceeded to try, by means of that simple but valuable instrument, the laws of colours, on the nature and origin of which many and varying notions had existed. It is not within the compass of our present undertaking, to enter fully into this subject, but we will only state, that the grand conclusion drawn by Newton, was, "That light consists of different rays, some of which are more easily refrangible than others;" that is, "are more easily turned out of their way in passing from one transparent body to another: and it follows that, after such refraction, they will be separated, and their distinct colour observed."

Thus our great philosopher, who is represented in his statue with the prism in his hand, and whom Thomson well terms the "awful Newton," proved that a beam of white light, as emitted from the sun, consists of seven different colours; namely, *Red, Orange, Yellow, Green, Blue, Indigo, Violet*; for into these seven colours is the beam separated by the prism‡. This was a startling discovery. "I could never think," says the celebrated Flamsteed§, "that whiteness

† The law of gravitation.

‡ A PRISM of Glass is, in the words of Sir Isaac Newton himself, "a glass bounded with two equal and parallel triangular ends, and three plain and well-polished sides, which meet in three parallel lines, running from the three angles of one end to the three angles of the other end."

§ The Rev. J. Flamsteed, the first astronomer-royal, an account of whom, together with his British Catalogue of Stars, has lately been edited by F. Baily, Esq., Vice-President of the Royal Society. The first effect of this work on the mind of the general reader, would probably be to lower his opinion of Newton's character, which Flamsteed, both in his history of himself and in his letters,

was a compound of all the different sorts of rays mixed: but, upon trial, I found all the experiments succeeded as Newton related them."

Strange to say, this theory, when offered to the world, was received, in some quarters, not only with feelings of jealous opposition, but of bitter unkindness towards their author, whose peace of mind was, in consequence, much disturbed; as appears from the following passage in his letter, to a man of science, dated 1675. "I had some thoughts of writing a further discourse about colours, to be read at one of your assemblies; but find it yet against the grain to put pen to paper any more on that subject:" and in a letter to Leibnitz, a distinguished German astronomer, in the course of the same year, he remarks, "I was so persecuted with discussions arising from the publication of my theory of light, that I blamed my own imprudence for parting with so substantial a blessing as my quiet, to run after a shadow." Nor did his anxieties, arising from the spleen of his enemies, terminate here. He had, indeed, been appointed Master of the Mint in 1699, through the generous influence of the Earl of Halifax, and knighted by Queen Anne in 1705; but in 1714, whilst much regarded in the court of George the First, we find him involved in a troublesome quarrel with Leibnitz, who contested with him the credit of a valuable invention in mathematics—that of Fluxions, and who tried to undermine him in the good opinion of the then Princess of Wales, (afterwards Queen-consort of George the Second,) by representing our great philosopher's views not only as false, but as tending to irreligion. Newton, however, is known to have been a firm believer, and a sincere Christian. His discoveries concerning the frame and system of the universe were applied by him to prove the being of a God, and to illustrate His power and wisdom in the creation. He likewise studied with the utmost attention the Holy Scriptures, and considered several parts of them with critical care, particularly as to the series of prophecies and events relating to the Messiah; and he left behind him an elaborate treatise, to prove that the famous prophecy of Daniel's weeks was an express prediction of the coming of the Messiah, and fulfilled in JESUS CHRIST, the eternal Son of God.

He was eighty years old, and appeared to be enjoying a green old age, when first seriously attacked by disease. It was then, after many years of robust health, that he was called to suffer agonizing pains, which, though they sometimes caused large drops of perspiration to run down his face, he bore with entire resignation to the will of the Almighty. A delightful instance of his mild and amiable temper is on record, as having occurred in the height of his fame. One day, on his having been called out of his study into an adjoining room, a favourite little dog threw down a lighted candle, by which a quantity of papers, and in them the labours of years, were consumed. When Sir Isaac returned, and noticed the injury he had sustained, he merely rebuked the dog by exclaiming, "O Diamond! Diamond! thou little knowest the mischief thou hast done!" In proof of the deep sense he entertained of his own insufficiency, and of the Divine perfections, we are told, in "Spence's Anecdotes," that once, when complimented on his great discoveries in philosophy, he answered, "Alas! I am only like a child, picking up pebbles on the shore of the great ocean of truth." Some amusing

would lead us to dislike: but those persons who look below the surface, will perceive in the language of the latter person, a querulous and pettish tone, when speaking of Newton, and an eagerness to take offence where none appears to have been intended. Still, the volume is curious, and the editor's task has been faithfully executed.

anecdotes of what we call absence are also related of him. But it is hardly fair to measure such a mind as Newton's by a common standard: his strength lay in thinking deeply and correctly, not in speaking; and whilst a member of parliament for the University of Cambridge, for some years, he seldom addressed the House.

This great man, who is well said on the pedestal of his statue, to have "surpassed all his fellow men in genius," expired on the 18th of March, 1727. Unlike the other philosopher of England, Lord Bacon, he knew the proper value of money; and though far removed from meanness, became rich, and was thus enabled to do many acts of kindness, particularly to his poor relations. His London residence was in St. Martin's Street, Leicester Square, at a house which may still be seen. He was honourably interred, at the public expense, in Westminster Abbey. M.

THE BOUQUETIN, or IBEX, (*Capra Iber.*)

THIS animal, which is one of the most elegant of the Goat tribe, was formerly found in the Alps and the Pyrenees in considerable abundance, but has latterly become much more rare, owing to the constant efforts of the hardy hunters of those regions. The whole of the goat tribe are noted for their cunning and lively physiognomy, their fine sense of smelling, and great activity and sureness of foot. Unlike many of the antelopes and stags, the female goats are all furnished with horns, which are, however, much smaller than those of the male. The favourite haunts of all these animals are the highest ranges of mountains to which vegetation extends, where they may be seen perched on the summits of the steepest peaks, or on the edge of the profoundest precipices. From these lofty situations, their quickness of sight enables them to perceive their enemies from a great distance. If pursued, their activity is such, that they can spring from rock to rock with the greatest rapidity. If, by any means, they should be brought to bay, and obliged to act on the defensive, the danger to which the hunter who ventures to approach is exposed is very great: this more particularly applies to the species represented in the engraving.

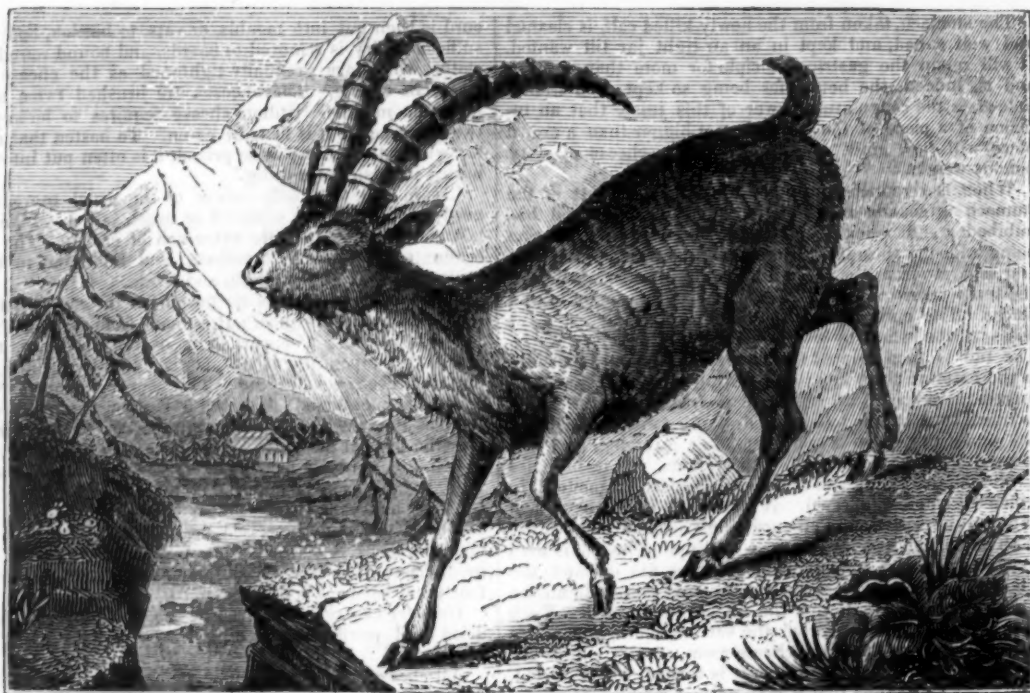
The following account of the habits of the Ibex, is extracted from Coxe's *Travels in Switzerland*.

The male Bouquetin is larger than the tame goat, but resembles it much in the outer form. The head is small in proportion to the body, with the muzzle thick, compressed, and a little arched; the eyes are large, round, and have much fire and brilliancy. The horns large, when of a full size weighing sometimes sixteen or eighteen pounds. The beard long, tawny, or dusky. The body short, thick, and strong.

The female is one-third less than the male, and not so corpulent; her colour is less tawny; her horns very small, and not above eight inches long. The young are of a dirty gray colour.

In a state of tranquillity, the Bouquetin generally carries the head low, but in running holds it high, and even bends it a little forward. He mounts a perpendicular rock of fifteen feet at three leaps, or rather three successive bounds of five feet each. It does not seem as if he found any footing on the rock, appearing to touch it merely to be repelled, like an elastic substance striking against a hard body. He is not supposed to take more than three successive leaps in this manner. If he is between two rocks, which are near each other, and wants to reach the top, he leaps from the side of one rock to the other alternately, till he has attained the summit. He also traverses the glaciers with rapidity, but only when he is pursued, for otherwise he avoids them.

The Bouquetins feed, during the night, in the highest woods; but the sun no sooner begins to gild the summits,



THE IBEX.

than they quit the woody region, and mount, feeding in their progress, till they have reached the most considerable heights. They betake themselves to the sides of the mountains which face the east or south, and lie down in the highest places, and hottest exposures; but when the sun has finished more than three-quarters of his course, they again begin to feed, and to descend towards the woods, whither they retire when it is likely to snow, and where they always pass the Winter.

The Bouquetins assemble in flocks, consisting, at the most, of ten, twelve, or fifteen, but more usually in smaller numbers. When the males are six years old and upwards, they haunt more elevated places than the females and younger Bouquetins; and as they advance in age, and are less fond of society, they become gradually hardened against extreme cold, and frequently live entirely alone.

In Summer they feed principally on the numerous species of aromatic plants which grow in the higher alps; and in Winter they eat the lichens, and browse on bushes, and the tender shoots of trees. They prefer those spots where the dwarf birch and alpine willows grow, and where *rhododendron thalictrum* and *saxifragas* abound.

The Bouquetins, having their fore-legs somewhat shorter than the hind-legs, naturally ascend with greater facility than they descend; for this reason, nothing but the severest weather can induce them to come down into the lower regions; and, even in Winter, if there are a few fine days, they leave the woods, and mount higher. The females generally produce but one young at a birth: this takes place in the last week in June.

The season for hunting the Bouquetin is toward the end of Summer; and in Autumn, during the months of August and September, when they are usually in good condition. None but the inhabitants of the mountains engage in the chase; for it requires not only a head that can bear to look down from the greatest height without terror,—address, and sure-footedness in the most difficult and dangerous passes, and to be an excellent marksman,—but also much strength and vigour to support hunger, cold, and prodigious fatigue. The most determined hunters of Bouquetins live in the mountains of the lower valleys. Two or three hunters usually associate in this perilous occupation. They are armed with rifle-barrelled guns, and furnished with small bags of provisions; they pass the night among rocks at considerable heights; and erect a miserable hut of turf, where they lie without fire or covering, and on waking, not unfrequently find the entrance blocked up with snow, three or four feet in depth. Sometimes, in pursuit of a Bou-

quetin, being overtaken by darkness, amid crags and precipices, they are obliged to pass the whole night standing, embraced, in order to support each other, and to prevent themselves from sleeping. As the Bouquetins ascend into the higher regions very early in the morning, it is necessary to gain the heights before them, otherwise they scent the hunter, and betake themselves to flight. It would then be in vain to follow them; for when once they begin to escape, they never stop till they think themselves entirely out of danger, and will even sometimes run for ten or twelve leagues.

The female shows much attachment to her young, and even defends it against eagles, wolves, and other enemies: she takes refuge in some cavern, and presenting her head at the entrance of the hole, thus opposes her enemy.

When a Bouquetin is shot, the hunters let it cool upon the spot, and then embowel it, putting the blood into one of the entrails, which is esteemed by the peasants a sovereign remedy in many disorders. A large Bouquetin, thus embowelled, will weigh 180 or 200 pounds; a female weighs only from 70 to 80 pounds.

THE USEFUL ARTS No. XVI.

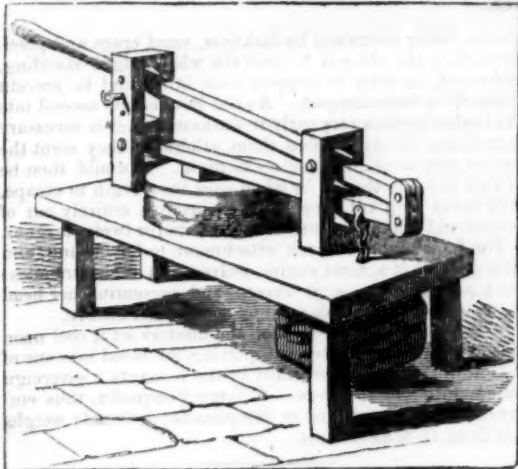
CHEESE, AS MADE IN ENGLAND, AND IN OTHER COUNTRIES.—MODES OF MAKING IT.—PROPERTIES OF THE MILK OF VARIOUS ANIMALS.

CHEESE consists of the curd, or albuminous part of milk, separated from the rest, salted and dried; but a great deal of the oily part of the butter is also preserved, to give flavour and richness to the cheese. The richest cheeses, therefore, are those which are made from the milk which has not been deprived of the cream. The difference of quality of cheeses, in a great measure, depends on this; but a large proportion of very good cheese is made from skimmed milk.

The first process necessary to making cheese, is to prepare some matter which, when added to the milk, will cause it to coagulate, or will separate the curd from the other elements. This may be effected by many substances, as has been mentioned; but that which is usually employed is a liquor obtained by steeping the stomach of a young calf in milk or water, and is called *rennet*. The gastric juice, with which the stomach of all animals is provided, possesses the power of coagulating milk. That of the calf is preferred, partly because it is readily obtained, and partly because it must possess this faculty in an eminent degree; cows' milk being the natural food of the young animal, and its stomach being therefore best adapted to digest that fluid.

The stomach, taken from the newly-killed calf, is cleaned and well salted, and kept in an air-tight jar till wanted. It will retain the gastric principle for more than a year, and is, indeed, the better for being so kept. So strong, indeed, is the coagulating power of this juice, that an infusion of a piece of the stomach, not bigger than a crown piece, will turn milk enough to make a cheese of sixty pounds weight.

When the rennet is wanted, the whole, or part of the stomach is soaked in water or milk, till the liquid has imbibed a sufficiency of the gastric juice*. This infusion being added to the rest of the milk, causes the curd to form and separate from the whey. The milk must be warmed to the temperature of 80° or 90°, to admit of this action taking place. The curd is next broken in small pieces, as it floats in the whey, by a wooden spatula, or *cheese-knife*. The tub is then covered up, and left till the curd subsides to the bottom: the whey is poured, or drawn off, and this process is repeated till the curd is freed from the liquid as much as it can be by simple draining. When the curd has again united, it is rebroken; salt is added, and it is pressed by a board loaded with weights, till it becomes hard and dry enough to remove to the *vats*, or moulds, in which the cheese is formed. A clean cloth is laid over each vat, and the salted, broken curd being packed on this, the cloth is folded over to cover it well up. The vat is then covered over with a circular board that fits it; and the whole is subjected to pressure in a screw-press, till all the whey is squeezed out, and the cheese is formed. Each cheese is then removed from the vat and cloth, and being set on a board, is kept in a cheese-room, or airy loft, to dry and mature; during which time it is turned, wiped, sorted, and every care taken that it may not get mouldy, or spoil.



THE CHEESE-PRESS.

In England, it is usual to colour cheese of a yellow or orange colour, by adding to the milk a preparation from the pulp covering the seeds of the Arnatto tree (*Bixa orellana*), a South American plant. This pulp is dried and preserved, and when powdered, is put into the warm milk, before the rennet is added. An ounce weight of genuine Arnatto will colour one hundred weight of cheese.

It has been computed that from three to four hundred weight of cheese, or double the weight of the butter, is annually made from the milk of each cow in England.

Cheshire cheese, which may be taken as the example of the best English ordinary kind, is made from the milk with the cream left in it; the morning's milk being added to that of the preceding evening, which is previously warmed. It has been calculated that there are 11,500 tons of this cheese made annually.

Stilton cheese. The cream collected from the preceding milking, is added, with the rennet, to the new milk. The curd is taken out whole, and put into a sieve to drain, and is pressed gently till it acquires some consistence. The

* In many countries the curd found, naturally formed from the mother's milk, by the action of the gastric juice, in the stomach of the calf, is made use of to turn milk for cheese-making. On some occasions, they impregnate bread with the juice of the stomach, and dry and preserve it; or, they macerate the stomach in vinegar, and keep this liquor for the purpose. In Holland, instead of rennet, muriatic acid is employed to coagulate the milk in the making of Gouda cheese.

curd is then put into moulds, or vats, to harden, and when sufficiently dry, is removed to boards, and bound round with cloths, which are gradually tightened as the cheese contracts in drying. The cheeses are brushed twice a day for some months. Stilton cheese requires to be kept for two years before it is fit to be eaten. To hasten that decay for which this cheese is so prized, it is often put into tubs, buried in fresh horse-dung.

Cream cheese is only cheese of the usual ingredients, newly made, and not coloured or much salted. Like that last mentioned, it is made extra rich of cream. The most celebrated is that of Cottenham, and Southam, in Cambridgeshire; Banbury, Bath, and York.

Parmesan cheese owes its flavour to the rich pasturage of the Lombard province. It is made from skimmed milk, which is put into a copper, hung over a wood fire, till it reaches a temperature of 84°, being well stirred during the time to prevent its burning. The copper being removed, and the rennet added, the curd is broken fine by stirring; some of the whey being removed, the copper is again put over the fire, till the whole is raised nearly to a boiling heat. When the curd is, by this means, rendered sufficiently solid, the cauldron is again taken off, and left till the curd subsides and cools: the whey is drawn off, and the curd taken out by a cloth passed under it, and placed in the mould. The rest of the process is similar to that for common cheese. The best Parmesan cheese is kept for three or four years before it is taken to market.

Gruyère cheese is flavoured by the *Melilotus officinalis*, dried and powdered; in other respects it is made like Parmesan.

All cheese for keeping must be impregnated with salt during its manufacture; and the more thoroughly the whey has been pressed out of the curd, the better the cheese will keep.

Every preparation of milk, and every separate ingredient of it, is wholesome; and when they disagree with any one, it is a sure proof that that person's stomach is diseased. Milk, cream, butter, cheese, fresh curds, whey, skimmed-milk, butter-milk, and even any, or all, of these, coagulated and sour by incipient putrefaction, are perfectly innocent to the healthy. Butter-milk and whey will undergo a spontaneous, vinous fermentation, if kept long enough, and alcohol can be distilled from them. They are used as intoxicating liquors, in this state, in the northern parts of our island. The Tartars, as is well known, prepare large quantities of spirituous drink from mare's milk.

The milk of the Mare is inferior in oily matter to that of the cow, but contains more sugar, and of the other salts.

The milk of the Ewe is as rich as that of the cow in oil, but contains less sugar than that of other animals. Cheese made of ewe-milk, is still made in some northern counties of England, and in Scotland, but it is gradually being disused, as inferior to that made from cow-milk.

The milk of the Ass approaches human milk in several of its qualities. To this resemblance it owes its use by invalids in pulmonary complaints; but it has no particular virtue to recommend it to this preference, and is only prescribed by nurses. It is, however, perfectly innocent.

Goats' milk, perhaps, stands next to that of the cow in its qualities; accordingly, it is much used in Southern Europe. It affords excellent cheese and butter, its cream being richer and more copious than that from cows' milk.

Camels' milk is employed in China, Africa, and, in short, in all those countries where that animal flourishes. It is however poor in every respect; but still, being milk, it is invaluable where better is not to be procured.

The milk of the Sow resembles that of the cow, and is used at Canton and other parts of China.

The milk of the Buffalo is precisely like that of the cow though the two animals belong to different species.

As far as we know, no nation uses the milk of any carnivorous animal. There is no reason for believing that the milk of this order of animals would be either disagreeable or unwholesome; but the ferocity and restlessness of the creatures will always present an obstacle to the experiment. It has been already mentioned, that the different milks of animals, with which we are acquainted, agree in their sensible and chemical qualities; and this is confirmed by the facility with which other animals, besides man, can be nourished in infancy by the milk of very distinct species, and even genera, or orders. Rats and leverets have been suckled by cats, fawns by ewes, foals by goats; and man, in all stages of his existence, has been nourished by the milk of various animals, except the carnivorous.

LABOUR AND CAPITAL.

If labour be a producer of capital, it is just and reasonable, that those who furnish labour for hire should keep this in mind, when considering the relation which they bear to other classes of the community. They will, however, commit a very serious error, if they suppose that the two species of property, Labour and Capital, may be confounded with each other. There are works to be performed for which capital is indispensable, and for which labour, to the most unlimited extent, could not be regarded as a substitute. Operatives will, therefore, not only be injuring others, but themselves, if they entertain erroneous notions respecting capital; and such erroneous views will be immoral and dishonest, if carried to the extent which appears to be the case with some, who seem to consider that capital, the result of labour, ought to be subject to their control.

When the operative has performed his work, and received the price of his labour, he has no more right in that which he has produced, than the baker would have to the bread which he has sold, and which the purchaser is about to put into his mouth. The product of labour may be consumed, like the bread of the baker, by the person who has paid for it; or it may remain with him, and add to the amount of his possessions, in other words, to his capital. He may employ others to work upon it, and give it new properties and increased value; and these, when they have been paid for their work, will have no more right in the new article than their predecessors. This kind of process may go on to an unlimited extent, and in an endless variety of ways, in all of which, labour is converted into capital; the value of which, it is true, may be increased by an amount of money, which is, in fact, one form of capital, and that which is often very conveniently exchanged for other forms. But money must not, any more than labour, be confounded with capital in its most extensive sense. The knowledge which an individual may acquire, is as much a species of capital as the sums of money which another individual may have in his iron chest, or at his banker's. Those who possess money may hire the time and talents of the well-informed, and thus make an exchange of capital.

The operative may also want the services of the well-informed, and give for them a portion of his own labour; but, his time being worth less, he must give it for a longer period. Thus, the operative and the wealthy, have both the means of procuring the use of a kind of property very different from that possessed by themselves, though neither would be correct in saying that their possession was a substitute for that which they receive; for, if the well-informed did not exist, neither the gold of the one, nor the labour of the other, could supply his place.

This example of capital in the form of knowledge, is perhaps as striking and intelligible as any which could be offered; but the principle is equally applicable to every other species of capital. If you see the full extent to which this reasoning may be carried, you will clearly perceive that labour and capital are not strictly convertible as substitutes, the one for the other; and that although capital may be the result of labour, yet that labour without capital would often be crippled and unproductive. You will, therefore, also perceive how much reason there is in regarding the strict observation of the rights of property, as the first step towards social order and civilization. If a person cannot retain the secure possession of, and control over, that which he acquires, he will have no inducement to acquire; every one would live, as it were, from hand to mouth. There right, it is

true, be many vigorous bodies capable of the performance of labour, but there would be no accumulation of capital; and consequently, this labouring force would be of little value. The largest number of able-bodied men which imagination can conceive, all ready to exert their most strenuous efforts, would not be equivalent to a small troop of workmen, each possessing a little capital in his acquired skill and his utensils, directed by intelligent persons, possessing a larger share of capital in their science and instruments, and having a still larger amount of capital to work with, in the materials which previous labour has collected and prepared. It is of the utmost importance that the labouring classes, especially when pressed by poverty, should duly consider the importance, even for their own interest, of rigidly respecting the rights of property; since, if that be consumed, or driven to other spots, they must themselves be the chief sufferers.

Property may be rendered insecure in various ways. It is by no means necessary that the highwayman should take the purse of his richer neighbour; that banditti should seize on wagon-loads of merchandize; that burglars should break into houses, and carry off gold, silver, and notes; or that incendiaries should destroy the well-harvested fruits of the field. The most serious evils resulting from the insecurity of capital, may be brought about by means less formidable in their appearance; means, which the higher, middle, and lower classes, are too often directing against the prosperity and happiness of their country. Those who contract enormous debts which they never mean to pay, and involve unfortunate creditors in ruin, whilst they leave immense entailed wealth to their heirs or representatives, are as great rogues as those barons of old, who invaded the estates of their neighbours, and taking *black-mail*, drove their cattle to their own fortresses. He who, in the middle ranks of society, supports a fictitious credit by accommodation bills, or by the sale of goods for which he never means to pay, is as dishonest as the thief, the highwayman, and the burglar; and still more injurious to the interests of society. And he who, imposing on the benevolence of the public, contrives to possess himself of the property of others, by fictitious or exaggerated tales of misery, and who lives by begging when he might work, is a worthless incumbrance upon society. Those who, by their conduct, destroy or impair the great productive resources of the country, whether agricultural, manufacturing, or commercial, as effectually injure their country as if they were foreign armies laying waste fields ripe for harvest.

There are various ways in which the operative classes are, directly and indirectly, benefited by the capital employed in the branches of business in which they are engaged. The ingenious artisan, or mechanic, finds means, with the consent of his employers, of making and attempting improvements which he might never have conceived, if their capital in machinery and other forms, had not been available to him; or which, could he have conceived them, he never could have found the means of putting to proof. Numerous instances have occurred in which individuals have raised themselves to reputation and wealth by this very simple advantage, which they have found in the capital of others. Instances are, perhaps, still more numerous, in which individuals, without extraordinary genius or talent, but simply by the force of good sense, honesty, and industry, have progressively raised themselves from poverty to wealth, whilst discharging their duty towards the property of others.

Many operations of a mercantile or manufacturing character, or large works, destined to add to the

prosperity or comfort of the country, and which give active employment to a large number of persons, could not be carried on without capital, which supplies not only the materials, but also wages and subsistence, during a long period, it may be of several years, in which the work is producing nothing. A large proportion of the productive and labouring hands in the country, are thus supplied with the means of subsistence, through the influence of capital, who would be thrown out of work, if they could be employed in no other labour than that which is immediately productive. A little reflection will show the great extent to which the supply of the necessaries and comforts of life to all classes, is to be attributed to the security of the rights of property, and to the opportunity which this security has afforded to individuals of talent, industry, and good management, to become possessed of property, or, in other words, to establish a capital.

A conviction of the importance of the security of property, which these considerations should induce, may not prevent comparisons of the inequality in the distribution of property, and of the evils which attend those who are placed at either extremes with respect to it. But, at the same time, all must be convinced, that an equal distribution of wealth can neither be hoped for, nor desired; and that the arbitrary measures which, by some, have been contemplated to bring it about, would be as ruinous and unsuccessful, as the idea is unjust and foolish. If all the property in the country could, in one day, be equally divided amongst the entire population, this equality would not continue for twenty-four hours; and the disturbance, ruin, and misery, which the attempt to bring about such a division would occasion, would not be counterbalanced by the smallest amount of advantage. The instances of individuals possessed of little or nothing, who have suddenly received considerable sums of money, which, instead of turning to their own advantage, they have dissipated with the utmost rapidity, in foolish and profligate expenses, are numerous; whilst it is extremely difficult to find an example in which the opposite result has followed. How often has the miser's hoard been completely fooled away, in a short space of time, by his heir, who has rather been intoxicated and ruined, than in any respect benefited, by the fortune to which he has succeeded! Even those sums which are the well-earned fruits of an individual's own hard service, if they are not collected by his own economy and care, are too apt to share the fate of ill-gotten, or foolishly-bestowed wealth. No instances of this kind are more striking, or more notorious, than those of sailors, who receive their arrears of wages after a long voyage.

The due consideration of these facts leads to two very important principles. The first, that it is foolish, as well as wicked, to envy the property which others possess by an undoubted right, and to seek to wrest it from them, in order to bestow it on those who have little or nothing. The second, that it is essential that all should duly feel the advantage of the careful, prudent, and economical expenditure of small sums, and of early acquiring the habit of spending less than they earn. The earlier this principle is acted upon, the easier and more effectual it will be; whilst the opposite is equally true, that if a person neglect the opportunity of saving, when the amount which he can lay up is small, he will lose the opportunity, as well as the disposition, to do so with a larger sum. Every sum, however small, which an individual lays up in conformity with this principle, is like a snow-ball, around which successive additions accumulate and add to its bulk. These additions must either

consist of what is rescued from consumption in the new productions to which the combined operation of labour and capital gives rise, and, therefore, constitute a real addition to the amount of capital in the country or they must be derived from the stores possessed by others, and, therefore, merely consist of a transfer of property. But, in either case, the tendency is to produce an equalization in the distribution of property, by the most effectual and advantageous means. The good order, as well as the happiness, of the poorer classes of society, would be greatly promoted by carrying this principle into general practice. Let it not, however, be supposed, that a propensity is here advocated to miserly hoarding, to sordid avarice, or to the inordinate love of money. The reckless neglect of economy where it is most wanted, may be corrected without falling into those evils.

When you do anything from a clear judgment that it ought to be done, never shun the being seen to do it, even though the world should make wrong suppositions about it. If you do not act right, shun the action itself; but if you do, why are you afraid of those who censure you wrongly.

[Abridged from the *Economical Library*.]

QUEEN ELIZABETH.

EVERY authentic circumstance relating to this great Queen, must be interesting to Englishmen. Her excellent judgment appeared in the wise choice of her ministers, and in the truly Protestant spirit which she displayed in the government of this country. If, then, it is curious to trace the habits and manners of famous individuals who have moved in a less exalted sphere of life, and in later days, it is still more interesting to obtain an exact and lively sketch, drawn to the life by an eye-witness, of a person so illustrious for rank, as well as tact and talent, as was our good Queen Elizabeth.

PAUL HENTZNER, a native of Germany, during the reign of the above Queen, performed a tour through England, France, and Italy, as travelling tutor to a young German nobleman. He landed at Rye in 1598, and made the best of his way to London, where he was amazingly struck with Westminster Abbey, old St. Paul's, the Tower, &c. He went to Windsor, and other parts of the country, noting down the various matters of curiosity which he beheld, and which he afterwards detailed in Latin, in a small volume now rarely met with. Horace Walpole, struck with his good Latinity, and the remarkable description he gives of Queen Elizabeth, published, and dedicated to the Society of Antiquaries, a translation of the part relating to England, from which we make an extract for the entertainment of our readers.

"The author," says Walpole in the preface, "seems to have had that laborious and indiscriminate passion for SEEING which is remarked in his countrymen. Fortunately, so memorable a personage as Queen Elizabeth happened to fall under his notice. Her best portraits scarcely exhibit a more lively image."

We arrived at the Royal Palace of Greenwich, reported to have been originally built by Humphry, Duke of Gloucester, and to have received very magnificent additions from Henry the Seventh. It was here Elizabeth, the present queen, was born; and here she generally resides, particularly in Summer, for the delightfulness of its situation. We were admitted by an order Mr. Rogers had procured from the Lord Chamberlain, into the presence-chamber, hung with rich tapestry, and the floor, after the English fashion, strewed with hay*, through which the Queen commonly passes in her way to chapel. At the door stood a gentleman

* He probably means rushes.

dressed in velvet, with a gold chain, whose office was to introduce to the Queen every person of distinction that came to wait on her. It was on a day when there is usually the greatest attendance of nobility. In the same hall were the Archbishop of Canterbury, the Bishop of London, a great number of counsellors of state, officers of state, officers of the crown, and gentlemen, who waited the Queen's coming out; which she did from her own apartment, when it was time to go to prayers, attended in the following manner:—

First went gentlemen, barons, earls, knights of the garter, all richly dressed, and bare-headed. Next came the chancellor, bearing the seals in a red silk purse, between two; one of which carried the royal sceptre, the other the sword of state in a red scabbard, studded with golden *fleurs-de-lis*, the point upwards. Next came the QUEEN, in the sixty-fifth year of her age, as we were told; very majestic; her face oblong, fair, but wrinkled; her eyes small, yet black and pleasant; her nose a little hooked; her lips narrow, and her teeth black (a defect the English seem subject to, from their too great use of sugar). She had in her ears two pearls with very rich drops; she wore false hair, and that red; upon her head she had a small crown, reported to be made of some of the gold of the celebrated *Luncheon** table. Her neck was uncovered, as all the English ladies have it, till they marry; and she had on a necklace of exceeding fine jewels. Her hands were small, her fingers long, and her stature neither tall nor low: her air was stately, her manner of speaking mild and obliging. That day she was dressed in white silk, bordered with pearls of the size of beans, and over it a mantle of black silk, shot with silver threads; her train was very long, the end of it borne by a marchioness: instead of a chain, she had an oblong collar of gold and jewels.

As she went along in all this state and magnificence, she spoke very graciously, first to one, then to another, whether foreign ministers, or those who attended for different reasons, in English, French, and Italian; for, besides being well skilled in Greek and Latin, and the languages I have mentioned, she is mistress of Spanish, Scotch, and Dutch. Whoever speaks to her, it is kneeling: now and then she raises some with her hand. While we were there, W. Slawata, a Bohemian baron, had letters to present to her; and she, after pulling off her glove, gave him her right hand to kiss, sparkling with rings and jewels; a mark of particular favour. Wherever she turned her face, as she was going along, every body fell down on their knees. The ladies of the court followed next to her; very handsome and well-shaped, for the most part dressed in white. She was guarded on each side by the gentlemen-pensioners, fifty in number, with gilt battle-axes. In the ante-chapel next the hall where we were, petitions were presented to her, and she received them most graciously, which occasioned the acclamation of "*Long live Queen Elizabeth!*" She answered it with, "*I thank you, my good people!*" In the chapel was excellent music* as soon as it and the service was over, which scarce exceeded half an hour, the Queen returned in the same state and order, and prepared to go to dinner; but while she was still at prayers, we saw the table set out with the following solemnity.

A gentleman entered the room, bearing a rod, and along with him another who had a table cloth, which, after they had both kneeled three times with the utmost veneration, he spread upon the table; and after kneeling again, they both retired. Then came two others, one with the rod again; the other with a salt-cellar, a plate and bread. When they had kneeled, as the others had done, and placed what was brought, upon the table, they too retired with the same ceremonies performed by the first. At last, came an unmarried lady (we were told that she was a Countess), and along with her a married one, bearing a tasting-knife. The former was dressed in white silk; who, when she had prostrated herself three times in the most graceful manner, approached the table, and rubbed the plates with bread and salt, with as much awe as if the Queen had been present. When they had waited there a little while, the yeomen of the guard entered, bare-headed, clothed in scarlet, with a golden rose upon their backs, bringing in at each turn a course of twenty-four dishes, served in plate, most of it gilt. These dishes were received by a gentleman in the same order they were brought, and placed upon the table, while the lady-taster gave to each of the guard a mouthful to eat of the particular dish he had brought, for fear of any poison. During the time that this guard, which consists of the tallest and stoutest men that can be found in all England, being care-

fully selected for this service, were bringing dinner, twelve trumpets and two kettle-drums made the hall ring for half-an-hour together. At the end of this ceremonial, a number of unmarried ladies appeared, who, with particular solemnity, lifted the meat off the table, and conveyed it into the Queen's inner and more private chamber, where, after she had chosen for herself, the rest goes to the ladies of the court.

The Queen dines and sups alone, with very few attendants; and it is seldom that anybody, foreigner or native, is admitted at that time, and then only at the intercession of somebody in power.

Near this palace is the Queen's Park, stocked with deer. Such parks are common throughout England, belonging to those who are distinguished either for their rank or riches.

Walpole, in his dedication, presumes to speak scornfully of the appearance here made by the Queen, which, he says, "makes one smile." But when we read of the respectful ceremony observed in decking her Majesty's table, though she was not present, and the general bending of the knees before her, we must remember that they were the customs of the times in which she lived. Her father had been treated with the same deference. It is mentioned by Fox, in his *Acts and Monuments*, that when the Lord Chancellor went to apprehend Queen Catherine Parr, he spoke to the king on his knees. James the First suffered his courtiers to omit it. And again, when disposed to smile at certain symptoms of personal vanity in Elizabeth, we should do well to consider what masculine sense was couched under the weaknesses of our GLORIANA†, who gathered round her the largest and brightest assemblage of great men this country ever boasted; scattered the projects of the haughty Spaniard to the winds; frustrated the "knaveish tricks" of the Pope; and commanded the awe of a nation like England.

† The name given to her Majesty by Spenser, in his *Faerie Queene*.

NEW YEAR'S EVE.

FAREWELL, Old Year! thy destined race
Will quickly have a close;
And thou, among thy forefathers,
Wilt sink into repose.
But ere to dark oblivion's shore,
Thy spirit wings its flight,
I fain would take thee by the hand,
And kindly say, Good night!
For though thy lapse hath given birth
To many a stormy hour;
Though sighs and tears have marked the reign
Of pain's subduing power;
Yet hath its scene full oft been deck'd
In sunshine and delight;
A thousand joys my heart hath known,—
But all are past,—Good night!
And though with thee thou bear away
From life's still-cherished store,
Days, weeks, and months, a numerous train,
That can return no more;
Yet will the loss prove gain to those
Who walk in Truth's fair light;
It brings them nearer to their home
And promised rest,—Good night!
We part to meet no more, old Friend,
Then let us part in peace:
Thou speedest to eternity,
Where strife and discord cease;
And I, if future years be mine,
How swift soe'er their flight,
Will strive their purpose to fulfil,
Then wish them all Good night

C. CROCKER.

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* It is not known what this was.